ABSTRACT OF THE DISCLOSURE

To produce a hydrogen absorbing alloy powder which is an aggregate of alloy particles each including a metal matrix and added-components, an aggregate of metal matrix particles and an aggregate of added-component particles are used, and mechanical alloying is carried out. In this case, the relationship between the particle size D of the metal matrix particles and the particle size \underline{d} of the added-component particles is set at $\underline{d} \leq D/6$. Thus, the milling time can be shortened remarkably.